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ARRT Registry Exam Practice Questions and 100% Correct Verified Answers| 2023/2024 Latest Update

QUESTION

Which of the following results in all-directional scatter?
a. compton
b. photoelectric
c. classical
d. coherent

Answer:
a. compton

QUESTION

which of the following are byproducts of photoelectric absorption?
a. photoelectron and Compton scattered electron
b. photoelectron and characteristic photon
c. low energy scattered xray photon and characteristic photon
d. low energy scattered xray photon and compton scattered electron

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Answer:
b. photoelectron and characteristic photon

QUESTION

which two interactions between x-radiation and matter result in the production of small-angle scatter?
a. coherent scattering and Compton scattering
b. coherent scattering and pair production
c. photoelectric absorption and Compton scattering
c. photoelectric absorption and pair production

Answer:
a. coherent scattering and Compton scattering

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QUESTION
which of the following interactions results in the conversion of matter into energy?
a. modified scattering
b. photoelectric absorption
c. annihilation reaction
d. classical scattering

Answer:
c. annihilation reaction

QUESTION
CR for AP axial sigmoid?

Answer:
30-40 degrees cephalic, 2 inches below the ASIS

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QUESTION
During the process of coherent scattering, the incident x-ray photon interacts with a(n):
a. atom transferring its energy by causing some or all of the electrons of the atom to vibrate momentarily and radiate energy in the form of electromagnetic waves
b. single inner shell electron, ejecting it from its orbit
c. single outer shell electron, ejecting it from its orbit
d. scattered photon of lesser energy, annihilating it

Answer:
a. atom transferring its energy by causing some or all of the electrons of the atom to vibrate momentarily and radiate energy in the form of electromagnetic waves

QUESTION
Particles associated with electromagnetic radiation that have no mass or electric charge are:
a. positrons
b. x-ray photons
c. negatrons

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d. ions

Answer:
b. x-ray photons

QUESTION
The x-ray photon energy required to initiate pair production is:
a. 1.022 MeV
b. 0.511 MeV
c. 1.022 keV
d. 0.511 keV

Answer:
a. 1.022 MeV

QUESTION
Radiographic density is:
a. not affected by milliampere-seconds (mAs)
b. caused by photodisintegration
c. defined as the degree of overall blackening on a completed radiograph
d. not relevant in the production of a diagnostic radiograph

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Answer:
c. defined as the degree of overall blackening on a completed radiograph

QUESTION
X-rays are carriers of:
a. fluorescent properties that make them visible
b. electrons
c. disease
d. manmade, electromagnetic energy

Answer:
d. manmade, electromagnetic energy

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QUESTION

Differences in density level between radiographic images of adjacent structures as seen in a completed radiograph define:
a. photodisintegration
b. radiographic density
c. image attenuation
d. radiographic contrast

Answer:
d. radiographic contrast

QUESTION

The probability of occurrence of photoelectric absorption _____ as the energy of the incident photon decreases and the atomic number of the irradiated atoms _____.
a. decreases markedly, increases
b. increases markedly, decreases
c. increases markedly, increases
d. stays the same, increases

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Answer:
c.
increases markedly, increases

QUESTION

The symbol Z indicates the:
a. atomic weight of an atom
b. atomic number of an atom
c. number of vacancies in an atomic shell
d. fluorescent yield

Answer:
b. atomic number of an atom

QUESTION

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